

03050208-070
(Coosawhatchie River)

General Description

Watershed 03050208-070 is located in Hampton and Jasper Counties and consists primarily of the **Coosawhatchie River** and its tributaries from Black Creek to its confluence with the Pocotaligo River to form the Broad River. The watershed occupies 139,753 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. The predominant soil types consist of an association of the Albany-Rains-Lynchburg-Goldsboro-Pelham series. The erodibility of the soil (K) averages 0.15, and the slope of the terrain averages 1%, with a range of 0-2%. Land use/land cover in the watershed includes: 46.0% forested land, 24.3% forested wetland, 18.4% agricultural land, 4.6% barren land, 3.2% nonforested wetland, 2.0% urban land, and 1.5% water.

Downstream of Black Creek, the Coosawhatchie River accepts drainage from Horse Pond, Mill Creek, Sanders Branch (House Fork), Camp Branch, Cowpen Branch, Horsegall Creek, Lowndes Lake, McPherson Creek, Broadway Branch, Big Branch, and the Cypress Creek Watershed. Downstream of Cypress Creek, the river accepts drainage from Early Branch, the Tulifiny River (Buckfield Backwater), Bay Swamp, Little Bees Creek, and Bees Creek (Captain Bills Creek) before merging with the Pocotaligo River to form the Broad River. The Tulifiny River connects with the Coosawhatchie River upstream of Bay Swamp and downstream of Bees Creek. Buckfield Backwater connects the Tulifiny River to the Pocotaligo River. There are a total of 149.5 stream miles, 194.0 acres of lake waters, and 1,041.9 estuarine acres in this watershed. The Coosawhatchie River and its tributaries, with the exception of Sanders Branch and Bees Creek are classified FW above the saltwater intrusion and SFH below the intrusion (in the vicinity of U.S. Hwy 17). Sanders Branch is classified FW* (DO no less than 4 mg/l and pH 5.0-8.5) and Bees Creek is classified SB.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
CSTL-108	S	FW*	SANDERS BRANCH AT SC 363
CSTL-010	S	FW*	SANDERS BRANCH AT SC 278
CSTL-011	S/BIO	FW*	SANDERS BRANCH AT S-25-50
CSTL-109	P	FW	COOSAWHATCHIE RIVER AT S-25-27, 2.5MI SW OF CUMMINGS
CSTL-107	P	FW/SFH	COOSAWHATCHIE RIVER AT US 17 AT COOSAWHATCHIE
MD-128	S	SB	BEES CREEK AT SC 462, 5.9MI NE OF RIDGELAND

Sanders Branch – There are three monitoring stations along Sanders Branch and there is a significant increasing trend in pH **at all sites**. At the furthest upstream site (**CSTL-108**), aquatic life uses are fully supported. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions. Further downstream (**CSTL-010**), aquatic life uses are fully supported. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions. At the furthest downstream site (**CSTL-011**), aquatic life uses are partially supported based on macroinvertebrate

community data and dissolved oxygen excursions. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in five-day biochemical oxygen demand suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.

Coosawhatchie River – There are two monitoring sites along this section of the Coosawhatchie River. Aquatic life uses are not supported at the upstream site (**CSTL-109**), due to dissolved oxygen and pH excursions, compounded by a significant decreasing trend in dissolved oxygen concentration. There is a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand, turbidity, total phosphorus concentration, total nitrogen concentration, and total suspended solids suggest improving conditions for these parameters. In sediment, a high concentration of zinc was measured in the 1996 sample, and very high concentrations of zinc were measured in the 1998 and 1999 samples. A very high concentration of lead was measured in the 1997 sediment sample. The PAHs chrysene, fluoranthene, phenanthrene, pyrene, and benzo[a]anthracene were detected in the 1997 sediment sample and dibutyl phthalate was detected in the 1999 sample. Recreational uses are fully supported, and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

The downstream site (**CSTL-107**) is located in an area that is transitional between fresh and salt waters. Aquatic life uses are fully supported under both freshwater and saltwater criteria. Although dissolved oxygen excursions were noted under both freshwater and saltwater criteria and pH excursions were noted under saltwater criteria, they were typical of values seen in such transitional areas and are considered natural, not standards violations. There is a significant decreasing trend in dissolved oxygen concentration and significant increasing trends in pH and turbidity. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Bees Creek (MD-128) – Aquatic life uses are partially supported due to dissolved oxygen and pH excursions, compounded by a significant decreasing trend in dissolved oxygen. This is a secondary monitoring station and sampling is intentionally biased towards periods with the potential for low dissolved oxygen concentrations. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions.

A fish consumption advisory has been issued by the Department for mercury and includes the Coosawhatchie River within this watershed (see advisory p.58).

Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-098	GB	TERTIARY LIMESTONE	RIDGELAND

All water samples collected from ambient monitoring well **AMB-098** met standards for Class GB groundwater.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
COOSAWHATCHIE RIVER GA PACIFIC/VARNVILLE SAWMILL PIPE #: 001 FLOW: M/R	SCG250051 MINOR INDUSTRIAL
SANDERS BRANCH TOWN OF HAMPTON PIPE #: 001 FLOW: 2.0	SC0021318 MAJOR DOMESTIC
SANDERS BRANCH NEVAMAR COMPANY, LLC PIPE #: 001 FLOW: 1.5	SC0001830 MAJOR INDUSTRIAL
SANDERS BRANCH CARSONITE INTERNATIONAL INC. PIPE #: 001 FLOW: 0.5	SCG250095 MINOR INDUSTRIAL
CAPTAIN BILLS CREEK TOWN OF RIDGELAND PIPE #: 001 FLOW: 0.25	SC0047929 MINOR DOMESTIC
LITTLE BEES CREEK COOSAWHATCHIE LAND COMPANY, LLC PIPE #: 001 FLOW: 0.01	SC0035394 MINOR DOMESTIC
LITTLE BEES CREEK TRIBUTARY STUCKEYS PECAN SHOPPE #083 PIPE #: 001 FLOW: 0.005	SC0034550 MINOR DOMESTIC

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
TOWN OF RIDGELAND DUMP DOMESTIC	----- INACTIVE
TOWN OF RIDGELAND DUMP #3 DOMESTIC	----- INACTIVE

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
PALMETTO CONSTRUCTION COMPANY 211 MINE	1233-53 SAND/CLAY

Growth Potential

There is a low to moderate potential for growth in this watershed, which contains the Town of Varnville and a portion of the Town of Ridgeland. There is a high potential for residential growth in the Ridgeland area. Ridgeland has expanded its regional treatment facility, which was built to address the needs of Del Webb's Sun City and Hilton Head. I-95 crosses the Town of Ridgeland and may provide some growth to the area.